

STATE OF MAINE

DEPARTMENT OF MARINE RESOURCES

IN THE MATTER OF THE APPLICATION OF)	
JOHN D. WOOD AND ROBERT W. JOHNSON)	FINDING OF FACT,
FOR AN AQUACULTURE LEASE LOCATED)	CONCLUSIONS OF LAW, AND
IN MOOSABEC REACH, BEALS, WASHINGTON)	DECISION
COUNTY, MAINE)	

On February 26, 1999, John D. Wood of Machiasport, Maine, and Robert W. Johnson of Addison, Maine, applied for an aquaculture lease totaling 7.36 acres of coastal waters of the State of Maine in Moosabec Reach, Beals, Washington County, Maine. The applicants requested the lease for a term of 10 years for the purpose of cultivating blue mussels, Mytilus edulis, and giant sea scallops, Placopecten magellanicus, using suspended culture techniques.

Approval of aquaculture leases is governed by 12 M.R.S.A. §6072. This statute provides that a lease may be granted by the Commissioner of the Department of Marine Resources (DMR) if it is determined that the project will not unreasonably interfere with the ingress and egress of riparian owners, navigation, fishing or other uses of the area; the ability of the site and surrounding areas to support ecologically significant flora and fauna; the use or enjoyment within 1,000 feet of municipally, state, or federally owned beaches, parks, or docking facilities. The Commissioner must also determine that the applicant has demonstrated that there is an available source of organisms to be cultured for the lease site.

A public hearing on this application was held March 2, 2000, at 7:00 p.m., in Beals.

**Evidence Introduced Concerning the Nature
and Impact of the Proposed Lease**

Mr. John D. Wood and Mr. Robert W. Johnson provided testimony on their application. Mr. Carter Newell, a mussel biologist and representative of Great Eastern Mussel Farms, Inc. (GEMF), provided testimony as a consultant for the applicants. Exhibits 1 and 2.

The partners testified that they are life-long commercial fishermen with extensive experience. According to the application, each partner owns a commercial fishing vessel used

as a dragger. Each partner has been a dragger fisherman for scallops, mussels or quahogs, and worked on lobster, scallop or mussel boats owned by other persons. Mr. Wood has worked on salmon farms, completed an aquaculture-training course and currently holds a 1.53-acre limited-purposed lease in Machiasport. According to the application, the partners have a commitment of financial support from GEMF for equipment, support vessels, and personnel during start-up, seeding and harvesting.

Both partners testified that their familiarity with the proposed lease site has come from dragging the area during the past four years. The consultant testified that he was also familiar with the proposed lease area. He explained that he had surveyed Moosabec Reach (the "Reach") from the breakwater to the Jonesport-Beals Bridge by SCUBA diving. According to the application, his survey was done in August 1998. In his opinion, the mussel set was heaviest in the channel, and near the Beals Bridge, where "quahog cars" are moored, not within the proposed lease area. The proposed lease site was selected primarily as an area within the Reach that was considered to be the least productive portion of that area for mussels.

The consultant testified that the start-up operation would begin with one or two 40' by 45' rafts during the first year. The four moorings used for the first raft could accommodate up to three connected rafts. During the second year, four additional moorings that would accommodate up to a total of six rafts would be deployed. Therefore, a maximum of three rafts per row, each row anchored by four moorings, would be set-up by the end of the second year. Subsequent increases would occur in multiples of three raft rows, using four moorings per row, for a maximum of 18 rafts. Three 3-raft systems would be deployed on the eastern end, and later duplicated on the western end. The rafts have a life expectancy of 7 to 10 years.

Individual rafts would be constructed of three large pontoons connected by five steel I-beams. There would be a total of 18 timber support beams, 3" by 4" size to 45' length, attached across the I-beams. The support beams hold up to 30 dropper lines, 30' to 36' deep, for a maximum of 540-drop lines per raft. The drop lines collect and grow-out mussels and would be made of ½" diameter polysteel rope. The clearance from the bottom of the drop lines would

range from 5' to 15', with an average of 10', due to the current flow that is expected to push the lines out at an angle with the strong tides. Exhibit 4.

The consultant testified that seed mussels would be bound to the drop lines using a hydraulic machine that wraps cotton mesh around the seed and drop line, creating an initial 2" to 3" diameter "seed mussel sausage". The mussels attach themselves to the rope or mesh and grow from there until harvested. The grow-out drop lines would be fitted with plastic pegs inserted in the rope every two feet to prevent the mussels from sliding off the rope. The mussel spat collectors would be made of the same ½" polysteel rope.

The consultant explained that the moorings would consist of 2,000 pound steel anchors or, according to the application, 8,000-pound granite blocks. Large auger anchors were also listed as an alternative type of mooring. A 1½" polysteel rope with a 40,000-pound breaking strength, using a 3 to 1 scope and a minimum of 15' of heavy bottom chain, would be used on all moorings. According to the applicant, this type of raft and mooring system has been used successfully worldwide and in Maine. The consultant stated that all moorings would be oriented parallel with the tidal current directions of the area. This orientation is recommended to prevent entanglement with any lobster or crab traps that may be set inside the moorings. He also testified that divers would tend the moorings approximately every one to two months after the initial start-up.

Mr. Wood testified that a weighted 3" mesh predator net, 20' to 30' deep, would be suspended around the perimeter of each raft. The predator net would be used to deter eider ducks or surf scooters from eating the mussels. The net would also prevent drift seaweed from clogging the drop lines. He stated that predator nets would be changed once per month, air-dried to clean, and then reused to replace a fouled net at the next changing. The consultant testified that predator nets would also be used to reduce the current to a level that mussels are able to more effectively feed, i.e. capture plankton from the water.

The consultant described the operations and typical frequency of activities. The initial set-up of a raft would take approximately one week. After the set-up, it would take a three-person crew one week to seed the drop lines on a raft.

When a raft of mussels is ready to harvest, a GEMF barge with a hydraulic crane would be used. The mussel barge and crew is able to harvest a full raft in five days at 200 bushels per day. Mussels would be stripped off the ropes either manually or mechanically, then washed and graded on the barge. According to the application, harvesting would take place year-round at full production. Therefore, after the initial set-up of a raft and moorings, there would be two weeks total of annual work per raft, seeding for one week, and harvesting for one week.

Mr. Wood testified that seed mussels would come primarily from mussel spat collected on ropes on site, from June through November, or purchased from a mussel seed supplier such as Tight Rope Sea Farms in Blue Hill, operated by Mr. Paul Brayton, or wild dragged seed from Maine. Scallop seed would be collected on ropes on site, and in the future, scallop seed is anticipated to be available from a Maine hatchery. He explained that they are waiting for the development of scallop aquaculture technology. He stated that, at this time, scallops could be raised by gluing, tying or attaching the scallop hinge, referred to as “ear-hanging”, to the drop lines or placing them in cages on the bottom. Mr. Wood testified that they would drag legal size scallops during the open season that have small size meats and hold them to increase the meat size.

According to the consultant’s diver survey of the proposed lease in August 1998, marine flora and fauna included a common abundance of mussels, scallops, rock crabs, sea cucumbers, kelp, starfish and whelks, and a few lobsters. The sediment type was described as a sandy mud with gravel. The area becomes softer toward the channel to the north and harder bottom to the south end of the proposed lease.

The consultant testified that he deployed a current meter on the proposed lease at a depth of 2 meters off the bottom. Speeds were recorded up to 40 cm/sec, with a mean speed of 20 cm/sec. The direction of the flow was east/west. According to the application, the current

speeds collected at the 2-meter height off bottom would be representative of speeds within 15% of the surface current speeds. The water depths at mean low water on the proposed lease range from 40' to 50' and there is a tidal range of 12' between mean low and mean high water.

According to the application, the Reach is dragged for mussels predominantly to the east and west of the proposed lease site. The area is also dragged for scallops in the winter. The applicants testified that the proposed lease had not been dragged much in the past four years and, in their opinion, was the least utilized area for dragging and lobster fishing in the Reach. According to the application, one local fisherman actively fishes the area for crab. Mr. Wood testified that traps could be set in the open areas of the lease. He explained that if traps become entangled in the moorings, the applicants would untangle the trap, or have divers untangle a trap, when the moorings were tended.

Divers would be allowed to harvest scallops, mussels, urchins, starfish, or cucumbers in the open area of the lease and beneath the rafts. Recreational fishing would be allowed on the open areas of the lease and between the moorings as long as the rafts and their moorings were not disturbed. The applicants testified that they would not install the additional structure buoy markers to restrict dragging within 300' of the rafts or moorings, as allowed under 12 M.R.S.A. §6957¹, unless draggers caused damage to the rafts or moorings and their placement. The consultant requested that a condition be placed on the proposed lease, if granted, that dragging would be allowed.

Mr. Wood testified that he had contacted the Coast Guard regarding navigation concerns and stated that the Coast Guard had no concerns about the proposed lease location. A letter from the local Harbormaster was included in the application. The letter indicated that the proposed lease would not interfere with navigation or moorings in the area. Mr. Wood stated that ice would not be a problem due to the bridge to the west and ledges to the east. He explained that these obstacles generally break up any ice that may form in the Reach.

¹ Pursuant to 12 M.R.S.A. §6957, dragging is prohibited within 300' of the structures used for aquaculture if that area is marked in accordance with that statute.

A marine biologist, employed by the Department, testified about the statutorily required site review he conducted June 17, 1999. The Department report included the following criteria: a SCUBA diver survey of the local flora and fauna and bottom composition; vertical profiles of the water column which include temperature, salinity, dissolved oxygen and pH, and depths; current information; proximity measurements of the proposed site to shore and to other leases; plus observations and documentation of local fisheries. Exhibit 3.

The biologist testified that he took an underwater video that began at middle of the eastern boundary, traveled through the middle of the proposed lease, and then past the western boundary to a mooring estimated to be 200' to 400' due west of the western boundary. The bottom sediments were described as firm with gravel patches, shell hash, small rocks, and an occasional boulder. The bottom had a scoured appearance, however it did not appear to have been recently dragged. No unusual measurements were recorded for temperature, salinity, or dissolved oxygen.

The local flora included an abundance of the red algae called Bushy Red Weed, common observations of kelp and common rockweed, and occasional amounts of the green algae, Sea Lettuce, and the brown algae called Smooth Cord Weed. The local fauna included an abundance of hermit crabs and fairly old blue mussels and mussel shellhash. Common observations were made of sea cucumbers and scallops, an occasional observation of finger sponges, green crabs, the maned nudibranch, northern sea stars, razor clams, rock crabs, the sea vase, and a stalked sea squirt. Winter flounder and two unidentified species of small fish were also noted. The biologist testified that, in his opinion, he would characterize the area as having a little bit of everything. He did not consider the amount of scallops observed to be of commercial quantity.

The biologist contacted the local Harbormaster for the Town of Jonesport, as the Town of Beals does not employ a Harbormaster. The Harbormaster was familiar with the existing lease and application. He indicated that, in his opinion, there would be no interference with navigation due to the proposed site location south of the main channel near shallow waters off

Pig Island; the area does not ice over in the winter and ice flows do not occur there; there are no moorings or traditional storm anchorages within the proposed lease and the Harbormaster expects few, if any, future moorings due to the shallow rocky nature of the area. He also indicated that the proposed lease area is not heavily fished and expressed a favorable opinion of the location.

According to the biologist's report, the shortest distance to shore from the proposed lease is approximately 1,075' from the northwest corner due west-northwest to the west end of the Jonesport breakwater. The closest existing aquaculture lease is a bottom lease for mussels due southwest approximately 0.5 miles.

The biologist testified that the western 372' of the proposed lease falls within an area classified as closed to the harvest of shellfish. The eastern end of Closed Area 54 extends due south from the tip of Henry Point, on the eastern edge of Sawyer Cove in Jonesport, to the town line between Jonesport and Beals in the middle of Moosabec Reach. (Note: Shellfish harvest is not allowed in a closed or "prohibited" area. Shellfish harvesting is allowed through one of two regulated processes called "relay" or "depuration." Relay is the movement of shellfish from a restricted area to an approved open area where the shellfish are kept and retested after six months prior to approval for market. Depuration is the movement of shellfish from a restricted area to an approved facility that holds the shellfish in clean water for less than six months before being retested and approved for sale to a consumer market.)

The biologist reported that the Town of Beals has an approved municipal shellfish program. However, the Town does not have a pollution abatement program in place. According to the Department file, it is the opinion of both the previous and current Directors of the DMR Public Health Division and Water Quality Program that the reclassification of the area from closed to open is highly unlikely within the next three years or beyond.

Three area dragger fishermen testified in favor of the concept of mussel raft aquaculture. However, each qualified his support. The dragger fishermen expressed concern that they should be able to continue to fish the proposed lease site. In their opinion, the site is productive

and they should have access to drag the open bottom at the proposed site. If not, they would prefer another location for the proposed operation.

In closing statements, the consultant testified that aquaculture would be performed only in the area classified as open by the Department. Closed area activities would take place only if approved by the Department. Up to 9 mussel rafts would be deployed on the open area in the beginning. The applicants would then request that the Department move the closed area line. Pending the movement of the closure line and any permission required, the closed area side would only be used for moorings, rearing scallops, and collection of scallop and or mussel seed. According to the consultant, the applicant would not seek depuration permits for the movement of seed shellfish from the closed area. Instead, seed mussels collected within the closed area would be sold to other Washington County growers. Mr. Wood testified that they would reduce the size of the proposed lease if the closed area portion could not be opened or if permission to collect seed was denied.

Findings of Fact

The proposed lease is located in water depths of 40' at mean low water, with a tidal range of 12', for an average high water depth of 52'. The site is approximately 1,075' from the western end of the Jonesport breakwater and that is the nearest distance to shore. There is no shorefront property and, therefore, no riparian landowners within 1,000' of the proposed lease boundaries. Based on the evidence and testimony that there are adequate water depths and ample room to navigate the area from the shore, I find that the lease will not unreasonably interfere with the ingress and egress of riparian owners.

The proposed lease is located south of the main navigation channel in the Reach. Evidence provided by the Jonesport Harbormaster and the Department's biologist confirmed that the proposed lease would not interfere with navigation of the area. According to the Harbormaster and Department biologist, there are no moorings within the proposed lease boundaries. Based on the testimony and evidence, I find that the proposed activities will not unreasonably interfere with navigation in the area.

According to the biologist's report, the Town of Beals has an approved municipal shellfish conservation program. However, the Town does not have a pollution abatement program. The western 372' of the proposed lease is located within Closed Area 54, effective since 1985, issued by Department's Public Health Division, Water Quality Program. The closed area portion of the lease is not anticipated to be reclassified as an open approved area, within the next three years or beyond, according to information provided by the Department's Director of Public Health.

The Director of the Department's Public Health Division, and the Marine Patrol Lieutenant in charge of the Division II Bureau in Lamoine, provided written objections to the granting of that portion of the proposed lease within Closed Area 54. In their opinion, the enforcement of the tracking and movement of seed shellfish collected within a closed area portion of a lease, that straddles a pollution closure line, would be complex and would easily compromise market-size product grown and harvested from the open side of the proposed lease. In the Director's opinion, enforcement, tracking, and public health concerns must be considered in this proceeding.

According to the testimony by the consultant and applicants, if permits could not be obtained to collect seed mussels within the closed portion of the proposed lease, then that area would be used for moorings and rearing scallops. It is not appropriate to grant a lease area for the storage of moorings.

According to the testimony of local area draggers, the proposed lease site is dragged for mussels and scallops. The applicant testified that it would allow lobster and crab fishing, recreational fishing, SCUBA diving and dragging in the open areas of the lease. This would include dragging between the moorings and adjacent to the rafts as long as no damage occurred. However, no description or detail on the placement or quantity of bottom cages proposed to rear scallops was provided. This lack of information contrasts with the stated willingness of the applicants to allow dragging or setting of traps on the open areas of the proposed lease. To resolve this apparent contradiction of the use of the open lease area, it is

concluded that, the placement of bottom cages would be restricted to either the area directly beneath the mussel rafts or in place of a mussel raft location.

According to the testimony and evidence, the closed area portion is highly unlikely to be opened within the next three years or beyond. Based on public health concerns, a lease that straddles a closed area line is unacceptable. The Public Health Director provided comments that the Department would not issue permits to collect, raise or move seed shellfish. The applicant stated willingness to relinquish the closed area portion, if permission to collect seed was denied, and it is this Hearing Officer's opinion, based on the administrative record, that permission would be denied by this agency. Based on the above, I find that the lease will not unreasonably interfere with fishing, aquaculture leases, or other uses of the area given that only the "open" portion of the proposed lease be granted, and that the use of cages be restricted to beneath, or in the place of, a mussel raft location as described in the record.

The proposed lease has adequate water depths and other favorable characteristics to accommodate the applicants' proposed activities. Dragging would not be used by the applicant on the proposed lease. However, dragging between the moorings and open areas would continue as allowed under the applicable laws by other fishermen. According to the Department biologist's report, the proposed lease does not fall within a Department of Inland Fisheries and Wildlife Essential Habitat for Endangered or Threatened Species designated $\frac{1}{4}$ mile boundary. Based on the evidence and testimony, I find that the proposed activities will not unreasonably interfere with the ability of the site and surrounding areas to support existing ecologically significant flora and fauna.

Seed mussels and scallops would be obtained by collecting mussel and scallop spat from the water column on ropes hung from the rafts on the proposed lease. Mussel seed may also be purchased from a seed mussel supplier in Maine such as Tight Rope Sea Farms in Blue Hill, or dragged from wild seed mussel beds located in Maine as allowed by Department regulation. Maine hatchery reared sea scallop seed is not available at this time, however it is anticipated that it will be available in the near future. The applicants also proposed to harvest

legal size scallops, that have a small meat weight, and raise those scallops to a larger meat size. Based on the evidence and testimony, I find that there is an available source of blue mussels and sea scallops.

According to the application and the Department biologist's report, the proposed activities would not be located near any public docks or facilities. The proposed lease is over 1,000' from any shore and approximately 1,075' to the Jonesport breakwater. Based on this evidence, I find that the proposed lease activities will not unreasonably interfere with public use or enjoyment and that the site is not located within 1,000' of any municipally, state, or federally owned beaches, parks, or docking facilities.

Conclusions of Law

Based on the above findings, I conclude that:

1. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner;
2. The aquaculture activities proposed for this site will not unreasonably interfere with navigation;
3. The aquaculture lease activities proposed for this site will not unreasonably interfere with fishing or other uses of the area, taking into consideration the number and density of aquaculture leases in the area;
4. The aquaculture lease activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna;;
5. The applicant has demonstrated that there is an available source of blue mussels, Mytilus edulis, and giant sea scallops, Placopecten magellanicus, to be cultured for the lease site; and
6. The aquaculture lease activities proposed for this site will not unreasonably interfere with public use or enjoyment within 1,000 feet of municipally, state or federally owned beaches, parks, or docking facilities.

The evidence in the record supports a finding that the proposed aquaculture activities meet the requirements for the granting of an aquaculture lease set forth in 12 M.R.S.A. §6072(7-A).

Decision

Based on the foregoing, the Commissioner grants that portion of the requested lease in the open approved area, consisting of 3.97 acres (473.3' by 377.2' by 427.2 ' by 393.3') to the

applicant for a period of ten (10) years from the date of this decision, for the purposes of cultivating blue mussels, Mytilus edulis, and giant sea scallops, Placopecten magellanicus, using suspended culture techniques as described in the application and the hearing record. The applicant shall pay the State of Maine rent in the amount of \$50 per acre per year. The applicant shall post a bond or establish an escrow account in the amount of \$5,000, conditioned upon its performance of the obligations contained in the aquaculture lease documents and all applicable statutes and regulations.

Conditions to be Imposed on Lease

The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities. Conditions are designed to encourage the greatest multiple, compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the aquaculture law.

The following conditions are placed on this lease:

1. commercial fishing including lobster, crab, sea cucumber, mussel and scallop fishing, recreational fishing, SCUBA diving, are allowed in the open areas of the lease;
2. scallop cages may only be placed beneath or in place of the location of a mussel raft; there is a maximum of nine 40' by 45' mussel rafts; and
3. the lease area shall be marked in accordance with U.S. Coast Guard and Department of Marine Resources regulations chapter 2.80.

The Commissioner may commence revocation procedures if he determines that substantial aquaculture has not been conducted within the preceding year or, that the lease activities are substantially injurious to marine organisms. If any of the conditions or requirements imposed in this decision, in the lease, or in the law are not being observed, the Commissioner may revoke the aquaculture lease.

Dated: _____

George D. Lapointe (Commissioner)
Department of Marine Resources